QUARTERLY UPDATE

FOR OCTOBER 1, 1993 THROUGH JANUARY 1, 1994

HISTORICAL RELEASE REPORT (HRR)

PREPARED BY

ENVIRONMENTAL RESTORATION
FACILITIES OPERATIONS MANAGEMENT

EG&G ROCKY FLATS, INC

JANUARY, 1994

PREFACE

The enclosed Historical Release Report (HRR) quarterly update complies with section I.B.3 of the Interagency Agreement (IAG).

Information making up this update process consists of an assessment of newly identified areas of known, suspect, and potential environmental releases or discoveries at the Rocky Flats Plant (RFP).

Newly identified areas of concern undergo review by the Environmental Protection Agency (EPA), Colorado Dept. of Health (CDH), and the Department of Energy (DOE). Upon final review, EPA and CDH will determine if further investigation for these areas or incidents is warranted. This update process shall incorporate pertinent correspondence letters (when available) identifying what actions and/or recommendations have been made. Additionally, this format includes all Rocky Flats Hazardous Substance Release Reports (HSRR's), and Contingency Plan Implementation Reports (CPIR's) available for this reporting period.

Information submitted in this update is formatted in the same reporting style as that of the original HRR dated June 1992. Four reportable findings or incidents have been assigned Potential Area of Concern (PAC) reference numbers for this report.

We are preparing to incorporate all of the Quarterly Updates submitted to your offices to date into a second revision of the HRR by April 8, 1994. The second revision will address original comments to the first version and include updated environmental maps an other information. We look forward to your review and recommendations for which you feel the submitted information may warrant further investigation.

In the next couple of days we will be contacting your offices to arrange a second meeting so we may discuss several issues we feel pertinent to this reporting process. A meeting agenda of topics to be discussed will be forwarded to you as soon as possible.

TABLE OF CONTENTS

PAC REFERENCE NUMBER: 400-812

IHSS Number N/A

Unit Name RCRA Unit # WMU 40 09, Tank T-2 in Building 460

Approx Location N36,000, E18,500 (RFP Coordinates)

Date(s) of Operation or Occurrence

November 10, 1993

Description of Operation or Occurrence

A release of process aqueous water occurred when Liquid Waste Operations (LWO) personnel were transferring 3,500 gallons of process aqueous water, which were generated in Building 460 and contained in Tank T-2, to a 4,000 gallon tanker truck for transport to Building 374 The spill was noticed 90 minutes into the operation when LWO personnel observed material coming from an air vent on top of the tanker Approximately 25 gallons of liquid were released onto the pavement and dock area outside of door 5, north of Building 460 [1]

Physical/Chemical Description of Constituents Released

The 25 gallons of material released to the pavement and dock were initially characterized as potentially containing the characteristic hazardous waste chromium (D007) A field pH test was performed and the released material was determined to have a pH of 6 0 to 6 5 Based on preliminary analytical screening results completed on November 11, the released material did not contain arsenic, barium, cadmium, lead or selenium Levels of chromium were detected but were well below the regulatory limit for the characteristic of toxicity due to chromium (5 0 ppm) Undigested Inductively Coupled Plasma (ICP) sweep results showed the level of chromium to be less than 0 5 ppm Based on these preliminary analytical results reported in CPIR 93-009, the released material was not a hazardous waste [1]

Responses to Operation or Occurrence

The RCRA Contingency Plan was implemented as described in CPIR 93-009, and CDH and EPA were notified of the occurrence LWO personnel immediately shut down the pumps from Building 460 and secured the discharge valves from Tank T-2 to prevent additional waste from entering the tanker Building 460 personnel took immediate action to contain the spread of material to the immediate area by laying down absorbent socks to block the flow of material The Rocky Flats General Labs Sample Team collected samples of the material inside the tanker, the material released onto the ground around the tanker and the soil under the tanker The RFP Haz-Mat team collected approximately 12 gallons of free liquids into a shop vacuum after the

material was sampled and placed it back into the Building 460 process waste system The absorbent socks and disposable personal protective equipment and the disposable equipment used by the sample team were drummed and placed in the Building 460 RCRA 90-day accumulation area On November 11, 1993, the affected soil was excavated and drummed as a precautionary measure to prevent the spread of possible contamination due to a threatening snowstorm All clean-up activities were conducted under the guidance of the RFP Haz-Mat Team [1]

Fate of Constituents Released to Environment

Of the 25 gallons released to the environment, approximately 12 gallons of material were recovered and placed back in the Process Waste System of Building 460 The remainder evaporated from the pavement and/or soaked into the soil in the vicinity of the tanker The soil affected by the release was recovered and drummed, generating 8 drums of material which were stored in the temporary 90-day accumulation area for Building 460 [1] Upon receipt of data for samples collected for the drummed soil, EG&G Waste Regulatory Programs declared the material non-hazardous, and it was redistributed in the immediate vicinity of the release [2]

Comments

None

References

[1]November 19, 1993 Resource Conservation and Recovery Act (RCRA) Contingency Plan Implementation Report (CPIR) No 93-009

[2]January 31, 1994 Personal Communication with M L Johnson, EG&G Waste Regulatory Programs

931-082 000
(JKC B \hrr\9309 hrr)

PAC REFERENCE NUMBER: 400-820

IHSS Number(s) 152, 157 1, 172

Unit Name Central Avenue Ditch Soil Spreading

Approx Location N36,500, E19,500 (RFP Coordinates)

Date(s) of Operation or Occurrence

September 27, 1993

Description of Operation or Occurrence

During a walkdown tour of several IHSSs, EG&G Environmental Restoration Management (ERM) and CDH representatives observed EG&G Plant Services spreading excavated soils from the Central Avenue Ditch (IHSS 157 1 for OU 13 and IHSS 172 for OU 8) into areas adjacent to the two large fuel oil tanks located on the southwest corner of Central Avenue and Seventh Street (IHSS 152) [1]

A review of the operation revealed that Plant Services spread the ditch spoils into IHSS 152 without authorization from ERM These instructions were in conflict with the April 7, 1993 Environmental Assessment for Construction Activities (Soils Disturbance Permit #TG048663) which provided specific instructions that all dirt, soil, gravel and rock removed from any of the ditches to be cleaned were to remain on the bank of the ditch and in the immediate area from which they were originally removed All material removed was to be spread and incorporated into the banks of the ditch Although no soil and/or water samples were to be required for this work, radiological screening was to be required when working in any of the IHSSs involved in this activity [1]

Physical/Chemical Description of Constituents Released

Potentially contaminated dirt from IHSSs 157 1 and IHSS 172 was spread into the IHSS 152 area The Central Avenue Ditch (IHSS 157 1) underwent a High Purity Germanium (HPGe) radiological survey both before the disturbance and again afterward and no radiological contamination was observed above background levels in either case [1]

Responses to Operation or Occurrence

The operation was immediately shut down due to the potential of cross contamination from one or more IHSSs to IHSS 152 Additional sampling will be required from one location in IHSS 152 for analytical parameters required in the OU 13 Work Plan for IHSS 157 1 In the event that

soil sampling results indicate cross contamination from one IHSS to another, ERM recommended that the area be investigated during implementation of the OU 12 Integrated Surface Water and Sediment Field Sampling Plan [1]

In addition to these actions, several actions were taken to prevent a similar occurrence in the future In general, these include briefings/training of construction and maintenance personnel by ERM to increase awareness of proper procedures by non-ER employees working in IHSS areas [1]

Fate of Constituents Released to Environment

Potentially contaminated dirt from Central Avenue Ditch was spread into IHSS 152 adjacent to the ditch and adjacent to two large fuel tanks The results of soil sampling from one location in IHSS 152 will help determine whether contaminants from the ditch impacted the area [1]

Comments

None

References

[1]EG&G, 1993 "Construction Activities in or Near Individual Hazardous Substance Sites," Internal Correspondence from N M Hutchins, Acting Associate General Manager Environmental Restoration Management, to J K Hartman and R J Schassburger, USDOE, November 12

931-082 000
(JKC B \hrr\centrald tch)

PAC REFERENCE NUMBER: 900-1308

IHSS Number N/A

Unit Name Outside the Southeast Corner of Building 980

Approx Location N37,000, E22,000 (RFP Coordinates)

Date(s) of Operation or Occurrence

November 22, 1993

Description of Operation or Occurrence

At approximately 6 00 p m , a Service Attendant was refueling Wackenhut Security, Inc , (WSI) vehicles at the southeast corner of Building 980 when a gasoline spill occurred Central Fleet Management fuel trucks refuel WSI vehicles inside the Protected Area (PA) from a truck that contains 3 fuel tanks carrying 50 gallons of gasoline, 80 gallons of gasoline and 80 gallons of diesel fuel The attendant had placed the 80 gallon tank hose in the 50 gallon tank to refill the 50 gallon tank, while the 50 gallon tank hose was laying in the truck bed ready to refuel the vehicle When the tank pump was turned on, the 50 gallon hose released approximately 0 7 gallons of gasoline to the truckbed and the ground because the hose nozzle had been inadvertently left on [1]

Physical/Chemical Description of Constituents Released

Seven-tenths of one gallon of gasoline were released to the environment [1]

Responses to Operation or Occurrence

The contaminated soil was excavated and placed in a black and white drum which was taken to Building 331 [1] Meetings were held with J A. Jones Personnel on December 2 and with WSI personnel on December 3 to discuss spill reduction in remote refueling operations The goals of the meetings were to minimize the number of refueling locations and to locate these over paved surfaces instead of dirt, away from IHSS areas [1,2,3] As a result of these meetings, the number of refueling locations within the PA were reduced to two which are located off of the roadway west of Portal 1 and west of the Cooling Tower 3, near Building 561 On weekends, the 750 courtyard is also used as a refueling location [1] In addition, three alternative locations have also been approved [5] On December 2, the manual catches on the garage portable refueling nozzles were removed to ensure that nozzles cannot be left open accidently [1]

Fate of Constituents Released to Environment

The gasoline-contaminated soil was excavated and placed in a black and white drum which was taken to Building 331 [1] The material was declared non-radioactive, however, it is currently being managed in a satellite collection area at Building 331 due to ignitible characteristics under RCRA [4]

Comments

A permanent fueling station within the PA is not an option because excavation would be required Providing a large tanker to refuel vehicles inside the PA is not an option due to Occupational Safety Requirements (OSR) for Buildings located within the PA WSI cannot refuel vehicles at permanent locations outside of the PA for security reasons [1] However, since the time of the release, several meetings with WSI have resulted in minor modifications to fueling locations within the PA that are agreeable with EG&G ERM, EG&G Transportation Department and WSI [5]

References

[1]December 6, 1993 Interoffice Correspondence from R.N Bell, Central Fleet Management, to Distribution re Manager's Meeting, Internal Report 3 1910, Fuel Spill On November 22, 1993-RNB-151-93

[2]December 6, 1993 Interoffice Correspondence from R.N Bell, Central Fleet Management, to Record re Portable Refueling Meeting RNB-152-93

[3]December 8, 1993 Interoffice Correspondence from R.N Bell, Central Fleet Management, to Record re Remote Refueling Meeting with WSI Personnel-RNB-153-93

[4]January 31, 1994 Personal Communication with M L Johnson, EG&G Waste Regulatory Programs

[5]January 31, 1994 Personal Communication with N S Demos, EG&G Environmental Restoration Management

931-082 000
(JKC B \hrr\gasspill hrr)

PAC REFERENCE NUMBER: 900-1309

IHSS Number N/A

Unit Name OU 2, Field Treatability Unit

Approx Location N750,000, E2,082,000

Date(s) of Operation or Occurrence

December 4, 1993

Description of Operation or Occurrence

Approximately 10 gallons of potentially contaminated water from an influent pipe system leading from Walnut Creek to the OU 2 treatment system were released to the environment The release was detected when a contractor responded to an alarm indicating that the release had occurred The contractor identified a slow leak coming from a connection in the secondary containment portion of the influent pipeline The source of the leak was a hole in the primary pipeline which resulted from the separation of two pipes which make up the secondary pipeline Thirty to forty gallons of the water were contained by the secondary containment structure The 10 gallon release estimate was based on visual observation of the wetted soil area No IHSS was involved in this incident [1]

Physical/Chemical Description of Constituents Released

Approximately 10 gallons of contaminated water designated as an "F001" listed hazardous waste were released The sources of the water being collected for treatment were SW59, SW61, and SW132, which contain mostly surface water runoff from the Protected Area (PA) This water is treated for removal of volatile organics, soluble metals and radioactive constituents and is sampled weekly for characterization The most recent sampling activities relative to the time of the incident took place on December 8, 1993 Based on over 100 sampling events that occurred from May 29, 1991 to December 3, 1993, F001 listed contaminants including 0carbon tetrachloride, methylene chloride, trichloroethene and tetrachloroethene Additionally, chromium and 1,2-dichloroethene, chloroform, 1,1-dichloroethane, and 1,1-dichloroethene have been detected in the influent water at low levels Other contaminants that have been tested for but not detected include acetone, vinyl chloride, barium, cadmium, lead and mercury Water potentially contaminated with previously detected wastes is normally treated in a Chemical Precipitation/Microfiltration/Granular Activated Carbon system to remove these contaminants from the water before being returned to the creek [1]

Responses to Operation or Occurrence

The RCRA Contingency Plan was implemented as described in CPIR No 90-010 The pumps were immediately shut down and the contractor personnel visually inspected the line for the release An emergency work package was initiated to repair the line, which was returned to service on December 8, 1993 The released material was not directly recoverable because it soaked into the soil Based on previous analytical results of the contaminated water, the immediate removal of the affected soil was not required because the contaminant concentrations in the soil should not pose an unacceptable risk to human health and the environment [1] On January 7, 1994, a risk assessment was completed using the influent water data and acceptable risk between 10^{-4} and 10^{-6} was verified [2]

Fate of Constituents Released to Environment

Ten gallons of contaminated water leaked into the soil The point of release was located under a road culvert The contaminated soil was not removed [1]

Comments

None

References

[1]December 16, 1993 Resource Conservation and Recovery Act (RCRA) Contingency Plan Implementation Report (CPIR) No 90-010

[2]January 31, 1994 Personal Communication with N S Demos, EG&G Environmental Restoration Management

931-082 000
(JKC B \hrr\9310 hrr)

REFERENCES

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC
ROCKY FLATS PLANT, P O BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

November 12, 1993

93-RF-14014

James K. Hartman
Assistant Manager
Transition and Environmental Restoration
DOE, RFO

Attn: R. J. Schassburger

CONSTRUCTION ACTIVITIES IN OR NEAR INDIVIDUAL HAZARDOUS SUBSTANCE SITES - NMH-586-93

Ref J K Hartman ltr (11739) to N. M Hutchins and D W. Ferrera, Construction Activities in the Vicinity of Individual Hazardous Substance Sites at the Rocky Flats Plant, October 20, 1993

In response to the above referenced letter, the following is being submitted:

EG&G Rocky Flats, Inc. Environmental Restoration Management (ERM) completed and approved an Environmental Assessment for Construction Activities (Soils Disturbance Permit #TG048663) on April 7, 1993. The assessment provided background information concerning Individual Hazardous Substance Sites (IHSSs) and specific instructions for EG&G Plant Services to proceed with the Integrated Work Control Program (IWCP) for cleaning drainage ditches in the lump sum area (including the Central Avenue Ditch).

Specific instructions for this construction activity were as follows:

1. All dirt, soil, gravel and rock removed from any of the ditches to be cleaned was to remain on the bank of the ditch and in the immediate area from which they were originally removed.
2. All material was to be spread and incorporated into the banks of the ditch.
3. Soil and/or water samples would not be required for this work. However, EG&G Radiological Engineering will request that radiological screening be required when working in any of the IHSSs involved in this activity (see attached Soils Excavation Permit).

On September 27, 1993, ERM conducted a walkdown tour of several IHSSs within Operable Unit 13 (OU-13) with the Colorado Department of Health (CDH) to delineate sampling locations and rational in accordance with the Phase I RCRA [Resource Conservation and Recovery Act] Facility Investigation/Remedial Investigation (RFI/RI) Work Plan. Both parties observed EG&G Plant Services spreading excavated

soils from the Central Avenue Ditch (IHSS 157.1 for OU-13 and adjacent IHSS 172 for OU-8) into areas adjacent to the two large fuel oil tanks located on the southwest corner of Central Avenue and Seventh Street (IHSS 152). The operation was immediately shut down due to the potential of cross contamination from one or more IHSSs to IHSS 152. A thorough review of the operation noted that Plant Services was instructed to spread the ditch spoils into IHSS 152 by EG&G Construction Management without the approval from ERM.

The impact of this action will require additional sampling from one location for analytical parameters required in the OU-13 Work Plan (for IHSS 157.1). Due to the fact that the Central Avenue Ditch (IHSS 157.1) underwent a High Purity Germanium (HPGe) radiological survey both before the disturbance and again afterward and no radiological contamination was observed above background levels in both cases, we do not suggest enlarging the IHSS 157.1 boundary.

In the event that soil sampling results indicate potential cross contamination from one IHSS to another, we recommend that the area be investigated during implementation of OU-12 Integrated Surface Water and Sediment Field Sampling Plan.

Effective no later than December 1, 1993, the following EG&G actions will have taken place to prevent a similar incident from occurring in the future:

1. Memorandum of Understanding (MOU) between EG&G Construction Management and EG&G ERM outlining responsibilities as stated in the draft procedure #1-F20-ER-EMR-EM.001 "Environmental Approval Process for Construction/Excavation Activities on or Near Individual Hazardous Substance Sites".

2. All Environmental Assessments for Construction Activities (Soils Disturbance Permits) involving IHSSs, Potential Areas of Concern (PACs) or Additional Areas of Concern (AACs) will be reviewed by the appropriate ERM Operable Unit Manager. Complete documentation will be available from the ERM Environmental Operations Manager. This process will also be applicable to spills or releases in or near an IHSS, PAC, or AAC. Completed October 12, 1993

3. ERM Environmental Operations Manager (or designee) will conduct a briefing to EG&G Plant Services personnel clarifying the importance of following proper guidance requirements and stressing the importance when conducting work in or near an IHSS. Completed November 12, 1993.

4. Assign additional ERM oversight to construction projects involving activities in or near an IHSS, PAC, or AAC. Also, include within some IWCPs a hold point where work will stop until the ERM Environmental Operations Manager (or designee) arrives at the site.

5. Provide for one additional soil sample to be collected during the implementation Phase I RFI/RI Non-Intrusive Investigation For Surficial Soil Sampling - OU-13. The additional analytical cost will be incurred under Work Package No. 61303 "Environmental Support To Plant Operations".

This incident will be reported in the next quarterly update report to the Historical Release Report (HRR) due January 31, 1994. Based on the above data and stated actions, EG&G requests concurrence to re-initiate the ditch cleaning efforts prior to snowfall.

If you have any questions or concerns regarding this response, please contact Nick Demos at extension 6938 or digital page 3842 or Bruce Peterman at extension 8659.

N. M. Hutchins, Acting
Associate General Manager
Environmental Restoration Management
EG&G Rocky Flats, Inc.

NSD:lmw

Attachment:
As Stated

Orig. and 1 cc - J. K. Hartman

cc:
R. H. Birk - DOE, RFO
A. H. Pauole - " "
M. N. Silverman - " "
B. K. Thatcher - " "

ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION ACTIVITIES

Authorization No.: TG048663
Reviewer: Environmental Restoration Management/Facilities Operations Management (ERM/FOM), T891E, x5949.
Date: April 7, 1993

OBJECTIVE:
Clean Ditches and Culverts Plantwide. This report is to serve as an addendum to add Culvert #13 and the ditches to the report completed June 3, 1992, by Tom Ottensman (see attachment #1).

JOB DESCRIPTION:
See attached.

ENVIRONMENTAL ASSESSMENT:

CULVERT #13:
The proposed construction/excavation involving Culvert #13 (see attachment #2) is not located in an Individual Hazardous Substance Site (IHSS) or Toxic Substance Control Act (TSCA) site.

ERM/FOM does not require sampling of the soil and/or water prior to or during construction/excavation activities.

DITCHES:
Many of the ditches to be dressed and cleaned are located in, or themselves comprise an Individual Hazardous Substance Site (IHSS) Those ditches are summarized below. ERM/FOM requires that all dirt, soil, gravel and rock removed from any of the ditches to be cleaned, remain on the banks of the ditch, in the immediate area from which they were originally removed. This material is to be spread and incorporated into the banks. ERM/FOM does not require sampling of the soil and/or water encountered during the construction/excavation activities.

The ditches paralleling Central Avenue are located in or near the following IHSS's (see attachment #1A):

IHSS #191, OU 13, Hydrogen Peroxide Spill (see attachment #3):
A drum of 35% Hydrogen Peroxide flowed into a culvert at the corner of Fifth Street and Central Avenue. The area of the spill is presently paved

IHSS #157.1, OU 13, Radioactive Site North Area (see attachment #4):
Contamination associated with the handling and steaming of contaminated rags was observed in the soils around Bldg. 442. This contamination included uranium, beryllium, solvents, and radioactive metal shavings, which could have been released into the Central Avenue Ditch.

IHSS #187, OU 12, Sulfuric Acid Spill (see Attachment #5):

Some 1500 gallons of acid leaked from a tank located east of Blog. 443, and flowed east. Some of the spill may have entered the Central Avenue ditch east of Bldg. 442.

IHSS #152, OU 13, Fuel Oil Tank 221 Spills (see attachment #6):
Past spills of No. 6 fuel oil from the tanks located on the southwest corner of Central Avenue and Seventh Street have flowed into the Central Avenue ditch.

IHSS #117.3, OU 13, Chemical Storage - South Site (see attachment #7):
Spills from a storage site located at the site of present fuel tanks 221 and 224 consisted of oils containing plutonium.

IHSS #190, OU 13, Caustic Leak (see attachment #8):
Past spills of sodium hydroxide have flowed into the Central Avenue ditch.

IHSS #113, OU 2, Mound Area (see attachment #9):
Contaminated combustible wastes, and organic liquid wastes with uranium and plutonium elements were placed in the Mound Area. The Central Avenue ditch flows through this area.

IHSS #162, OU 14, Radioactive Site - 700 Area,Site #2 (see attachment #10):
Some radioactive contamination was detected in an excavation located along Eighth Street and Central Avenue. Some residual contamination may have entered the Central Avenue ditch

IHSS #172, OU 8, Central Avenue Waste Spill (see attachment #11).
A leaking drum on a truck spilled radioactive contaminated solvents along portions of Central Avenue, some of which may have reached the ditch.

IHSS #108, OU 2, Trench T-1 (see attachment #12):
Drums of depleted uranium chips and lathe coolant were buried in a trench approximately 200 feet long, 15 feet wide, and 5 feet deep This trench is only a few feet south of the Central Avenue Ditch.

IHSS #153, OU 2, Oil Burn Pit (see attachment #13):
Drums containing oil contaminated with uranium were burned in an open pit located north of Central Avenue and adjacent to the present Central Avenue ditch.

The ditches paralleling Sage Avenue are located in or near the following IHSS's (see attachment #14):

IHSS #128, OU 13, Oil Burn Pit No. 1 (see attachment #15):
Contaminated oil was burned in a pit located north of Bldg. 331, and the pit was later backfilled.

IHSS #134, OU 13, Metal Disposal Site North Area (see attachment #16)·
Reactive metals were burned in this area, part of which is now covered by Sage Avenue.

IHSS #156.1, OU 14, Bldg. 371 Parking Lot (see attachment #17):
At one time contaminated soils may have been piled in the area now covered by the 371 parking lot.

IHSS #186, OU 13, Valve Vaults 11, 12, and 13 (see attachment #18):
Process wastes consisting of Oakite, solar pond water, and various radioactive acidic liquids have leaked into valve boxes and the surrounding soils. Some of

this contamination could have entered the ditch along the east side of Bldg 371 parking lot.

Potential Area of Concern (PAC) #300-707, Sanitizer Spill (see attachment #19). Approximately three gallons of sanitizer consisting of water and formaldehyde were spilled on the shoulder of the road at Sixth Street and Sage Avenue.

The ditches paralleling Seventh Street (north of Central) and 51 Drive are located in the following IHSS's (see attachment #20):

IHSS #117.2, OU 13, Middle Site Chemical Storage (see attachment #21): Leaks and spills in this area have consisted of acids, oils, soaps, solvents, beryllium scrap, and aluminum nitrate. Any of these contaminants could have entered the drainage ditches.

IHSS #158, OU 13, Radioactive Site - Bldg. 551 (see attachment #22) Residual contamination from leakage of waste boxes loaded onto railroad cars in the vicinity of Bldg. 551 could be present in the drainage ditches Uranium is the contaminating constituent.

IHSS #169, OU 13, Waste Drum Peroxide Burial (see attachment #23): Hydrogen Peroxide spills drained into a culvert at the corner of Fifth and Central Avenue, were diluted with water and buried.

The ditches paralleling Cottonwood Avenue, 44 Drive, and Seventh Street south of Central Avenue are located in the following IHSS's (see attachment #24):

IHSS #157.2, OU 12, Radioactive Site South Area (see attachment #25): Numerous incidents of contamination releases are associated with the area around Bldg. 444. These contaminants include uranium, beryllium, solvents, and oils. The drainage ditches around the area could contain these contaminants

IHSS #189, OU 12, Nitric Acid Tanks (see attachment #26): Nitric acid spills have occurred in the area of the railroad tracks east of Bldg 444, and may have contaminated soils since washed into the drainage ditches

IHSS #160, OU 14, Radioactive Site - 444 Parking Lot (see attachment #27): Uranium and plutonium, as well as oils and solvents, have previously been stored in the area now utilized as the 444 parking lot; and may have entered the drainage ditches east of the lot.

IHSS #136.2, OU 12, Cooling Tower Pond East of Bldg. 444 (see attachment #28): Cooling tower cleansers were contained in ponds east of Bldg. 444 and allowed to evaporate, at which time the ponds were backfilled. The cleaning agents may have contained chromium and lithium.

IHSS #117.3, (see attachment #7 above).

WETLANDS AND ENDANGERED SPECIES:

Not applicable, per Claire Reno, NEPA Division.

TRANS

RF 14295

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ANCH, D B		
ARIVAL, G J		
BRCH, A A	X	X
BUF, R D		
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GUNN, B J		
HUMAN, L K		
KALY, T J		
LODAHL, T G	X	X
LOBIG, J G		
LOBY, W A	X	X
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CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER SIGNATURE

M.D. Sheard

11-19-93

DATE

IN REPLY TO RFP CC NO:

None

ACTION ITEM STATUS

LOPEN

LOAPPROVALS

Cal

ORIG & TYPIST INITIALS

KAM

OF-46469 (Rev 9/93)

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P O BOX 464 GOLDEN COLORADO 80402 0464 • (303) 966-7000

November 19, 1993

93-RF-14295

Mark N. Silverman
Manager
DOE, RFO

Attn. D. Grosek

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT (CPIR) NO. 93-009 - TGH-641-93

Enclosed is a draft letter to the Colorado Department of Health (CDH) to transmit the RCRA CPIR No 93-009, also enclosed The report outlines the events and response actions associated with the release of material from a tanker truck during transfer operations from Building 460 to Building 374 The total quantity of material released was approximately 25 gallons of which 12 gallons were recovered The Plan was implemented as a precaution because a hazardous waste was being transferred at the time of the overfill. Preliminary results from samples taken of the released material indicate that a hazardous waste was not released.

CDH was notified of the incident on November 10, 1993, at 4:43 p.m The Environmental Protection Agency, Region VIII (EPA) was notified by facsimile on November 12, 1993, (the office was not staffed on November 11, 1993). This report should be delivered to CDH no later than November 25, 1993, as required by 6 CCR 1007-3, Section 265.56(j).

If you have any questions regarding this matter, please call N. P. Cypher at 966-5782, G. H. McElhinney at 966-4990 or E M. Pasic at 966-2297.

T. G. Hedahl, Associate General Manager
Environmental and Waste Management

EMP:kam

Orig. and 1 cc - M. N. Silverman

Enclosures:
As Stated (2)

DRAFT DRAFT DRAFT

Colorado Department of Health
Hazardous Materials and Waste Management Division
HMWMD-HWC-B2/Frederick R. Dowsett, PhD.
4300 Cherry Creek Drive South
Denver, Colorado 80601

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT (CPIR) NO 93-009

Enclosed is RCRA CPIR No. 93-009 which outlines the events and response actions associated with the release of material from a tanker truck during transfer operations from Building 460 to Building 374. The total quantity of material released was approximately 25 gallons of which 12 gallons was recovered. The Plan was implemented as a precaution because a hazardous waste was being transferred at the time of the overfill. Preliminary results from samples taken of the released material indicate that a hazardous waste was not released.

If you have any questions regarding this subject, please contact me at 966-4561 or Dave Grosek at 966-3305.

Enclosure:
As Stated

cc:
D. M. Maxwell - EPA, Region VIII
B. Brainard - DOE, RFO
D. Grosek - " "
T. E. Lukow - " "
W. E. Seyfert - " "
N. P. Cypher - EG&G Rocky Flats, Inc.
T. G. Hedahl - " " " "
M. L. Johnson - " " " "
G. H. McElhinney - " " " "
A. L. Schubert - " " " "

RCRA CONTINGENCY PLAN
Implementation Report No. 93-009

RCRA CONTINGENCY PLAN
IMPLEMENTATION REPORT
ROCKY FLATS PLANT
EPA ID NUMBER CO7890010526

This report is made in compliance with the requirements of 6 CCR 1007-3, Parts 264.56 (j) and 265.56 (j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this are given below and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Parts 264.56 and 265.56:

"(j)...Within 15 days after the incident, he must submit a written report on the incident to the department. The report must include:

(1) Name, address, and telephone number of the owner or operator
(2) Name, address, and telephone number of the facility
(3) Date, time, and type of incident (fire, explosion)
(4) Name and quantity of material(s) involved
(5) The extent of injuries, if any
(6) An assessment of actual or potential hazards to human health and the environment, where this is applicable, and
(7) Estimated quantity and disposition of recovered material resulted from the incident."

---

(1) **Name, address and telephone number of the owner of the facility:**

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

Facility Contact:
Mark N. Silverman, Manager

(2) **Name, address and telephone number of the facility:**

U.S. Department of Energy
Rock Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

(3) Date, Time and Type of Incident:

A. SUMMARY

The RCRA Contingency Plan was implemented as a precaution due to the release of material from a process waste tanker during a transfer of hazardous waste from Tank T-2 in Building 460 (RCRA Unit # WMU 40 09). The release occurred at approximately 2:30 p m. November 10, 1993, when material overflowed from a vent on the top of the tanker during the transfer process. Approximately 25 gallons of material was released onto the pavement and soil outside Door 5 of Building 460. Personnel involved in the transfer process immediately shut down the transfer pumps and closed the discharge valves on Tank T-2 upon noticing the overflow. Building 460 personnel diked the flow from the tanker with absorbent booms to prevent the spread of the material from the vicinity of the tanker. Rocky Flats Haz-Mat personnel responded to the scene and recovered approximately 12 gallons of free liquid from the pavement and soil after samples were taken. The recovered liquid was placed back into the process waste system of Building 460.

Based on process knowledge of the hazardous waste being transferred from Building 460, the released material could contain chromium (D007) above the regulatory limit for the charactenstic of toxicity Tank T-2 was sampled prior to the transfer and showed a level of pH of 4 6; therefore, the hazardous waste was not a characteristic waste for corrosivity

Tank T-2 has a capacity of 3500 gallons and is routinely transferred when it reaches a level of approximately 3500 gallons. The tanker has a capacity of 4000 gallons, and was verified empty per the established procedure. Based on the amount of liquid transferred from Building 460, and the time taken to fill the tanker to capacity, it was determined that approximately 1740 gallons of liquid were present in the tanker at the start of the transfer operation; however, based upon the amount of liquid received from the previous delivery to Building 374 prior to the transfer of liquid from Building 460 and a statement from the truck driver, no liquid was retained in the tanker upon delivery to Building 460.

The exact cause of the overfill was not determined The material released from the tanker was tested at the scene and found to have a pH of 6.0 to 6 5.

Samples of the material were collected for laboratory analysis The preliminary analysis using analytical screening methods were completed on November 11, 1993. The preliminary results indicate that the released material was not a hazardous waste. Levels of chromium in this sample were well below the regulatory limit for toxicity (i.e., 5 ppm). Results from the Toxicity Characteristic Leaching Procedure (TCLP) analysis for the released material and the affected soil will be forwarded to CDH as soon as they are available.

B. SYSTEM DESCRIPTION

The process waste system in Building 460 consists of numerous lines, tanks, and valves which accumulate waste water into two 3500 gallon tanks (T-1 and T-2). Tanks T-1 and T-2 are the final accumulation point for waste generated in Building 460 before the waste is transferred to Liquid Waste Operations for final disposition (see page 6). The system has a secondarily contained process waste line that transfers waste to Valve Vault 18, however the secondary containment line is suspected to be inadequate. Therefore the transfer system has been shut down since March 1, 1993.

The current method of shipping waste out of Building 460 is to transfer the waste to a 4000 gallon tanker truck which off loads the waste to Building 374. The temporary transfer line from the building to the tanker is secondarily

The temporary transfer line from the building to the tanker is secondarily contained. There is no secondary containment provided for the tanker. A small catch pan is placed under the connection from the tanker to the building during the transfer operation.

The tanker is also used to collect incidental water from the Building 750 Pads and other areas around plant site. The Building 460 process waste system is the only RCRA tank system that is transferred to Building 374 by tanker.

C. DESCRIPTION OF INCIDENT

On November 5, 1993, tank T-2 was isolated by Liquid Waste Operations (LWO) personnel and the contents of tank T-2 were sampled and analyzed for pH, total alpha radiation, and beryllium per the established waste acceptance criteria for Building 374. The tank contained approximately 3500 gallons of process aqueous waste generated at various points throughout Building 460. The analytical results indicated that the waste was acceptable for transfer to Building 374. On November 10, 1993, at approximately 10:30 a.m., LWO informed Building 460 personnel that LWO was ready to ship the tank. On November 10, 1993, at approximately 1:05 p.m., LWO personnel proceeded to transfer the contents of tank T-2 to a 4000 gallon tanker truck for transport to Building 374.

Approximately 90 minutes into the operation (at approximately 2:30 p.m.), the LWO personnel noticed material coming from an air vent from on top of the tanker. Approximately 25 gallons of material was released onto the pavement and dock area outside door 5 north of Building 460 LWO personnel immediately shut down the pumps from Building 460 and secured the discharge valves from tank T-2 to prevent additional waste from entering the tanker. The LWO personnel notified the shift foreman from LWO who notified the Shift Superintendent. The Shift Superintendent notified the Rocky Flats Haz-Mat Team. Building 460 personnel took immediate action to contain the spread of material to the immediate area by laying down absorbent socks to block the flow of material. The Rocky Flats General Labs Sample Team collected samples of the material being collected from Building 460, the material inside the tanker, the material released onto the ground around the tanker, and the soil under the tanker. The Rocky Flats Plant Haz-Mat team proceeded to collect the free liquids into a shop vacuum after the material was sampled. Approximately 12 gallons of free liquid was recovered. The material recovered by the Haz-Mat team was placed back into the process waste system of Building 460. The absorbent socks and disposable personal protective equipment and the disposable equipment used by the sample team were drummed up and placed in the Building 460 RCRA 90-day accumulation area.

The tanker was verified per procedure to have been empty prior to delivery to Building 460; however, based on the amount of liquid transferred from Building 460 (approximately 2000 gallons), and the time taken to fill the tanker to capacity (approximately 90 minutes), supports a premise that approximately 1740 gallons of liquid were present in the tanker at the time of the start of the transfer operation. The transfer of material from Building 460 exceeded the capacity of the tanker causing it to be overfilled and release the mixture of material being transferred from Building 460 and the material already in the tanker. The previous shipment of material in this tanker consisted of rain water and was transferred to Building 374 per procedure prior to use at Building 460.

On November 11, 1993, the affected soil was excavated and drummed up as a precautionary measure to prevent the spread of possible contamination due to the threatening weather (forecast of snow). The tanker was off loaded on November 12, 1993, and found to have contained 3740 gallons of material.

D. CORRECTIVE ACTION

Pursuant to 6 CCR 1007-3, Part 265.196 and existing safety procedures at Rocky Flats:

- A review of procedures followed by Liquid Waste Operations personnel to verify that the tanker was indeed empty is being done. Procedures for liquid waste transfer are also being reviewed.
  - Verify the capacity of the tanker.
  - Design and build a level indicator for the tanker.
- An Integrated Work Control Package (IWCP) was initiated on May 24, 1993, to repair the process waste transfer line to Valve Vault 18. The IWCP is currently being reviewed by the plant Facilities Engineering Department. The identification number of the IWCP is TJO067575.
- Samples were collected on November 10, 1993, will be analyzed by the General Labs at Rocky Flats in order to analytically characterize the released material.
- Waste generated by the cleanup efforts was placed in two RCRA 90-day accumulation areas (Unit # 460-516 and Unit #460-2060).

(4) OPERATIONAL STATUS:

The underground transfer line from Building 460 to Valve Vault 18 remains shut down until the secondary containment portion can be repaired and verified to be adequate Transfers from Building 460 continue to be made by tanker

(5) NAME AND QUANTITY OF THE MATERIAL INVOLVED:

Approximately 25 gallons of material was released to the pavement and soil in the vicinity of the dock area outside of Door 5 north of Building 460. At the time of the incident, the released material was characterized by process knowledge to possibly contain hazardous waste for the characteristic of chromium (D007). A field pH test was done and the released material was found to have a pH of 6.0 to 6.5. Based on preliminary analytical screening results completed on November 11, 1993, the released material did not contain arsenic, barium, cadmium, lead or selenium. Levels of chromium were detected but were well below the regulatory limit for the characteristic of toxicity. Undigested Inductively Coupled Plasma (ICP) sweep results showed the level of chromium in the released material to be less than 0.5 ppm (regulatory limit for the characteristic of toxicity for chromium is 5.0 ppm) Validated final Toxicity Characteristic Leaching Procedure (TCLP) results of the released material will be forwarded to the Colorado Department of Health as soon as they are available.

(6) EXTENT OF INJURIES:

There were no injuries to personnel.

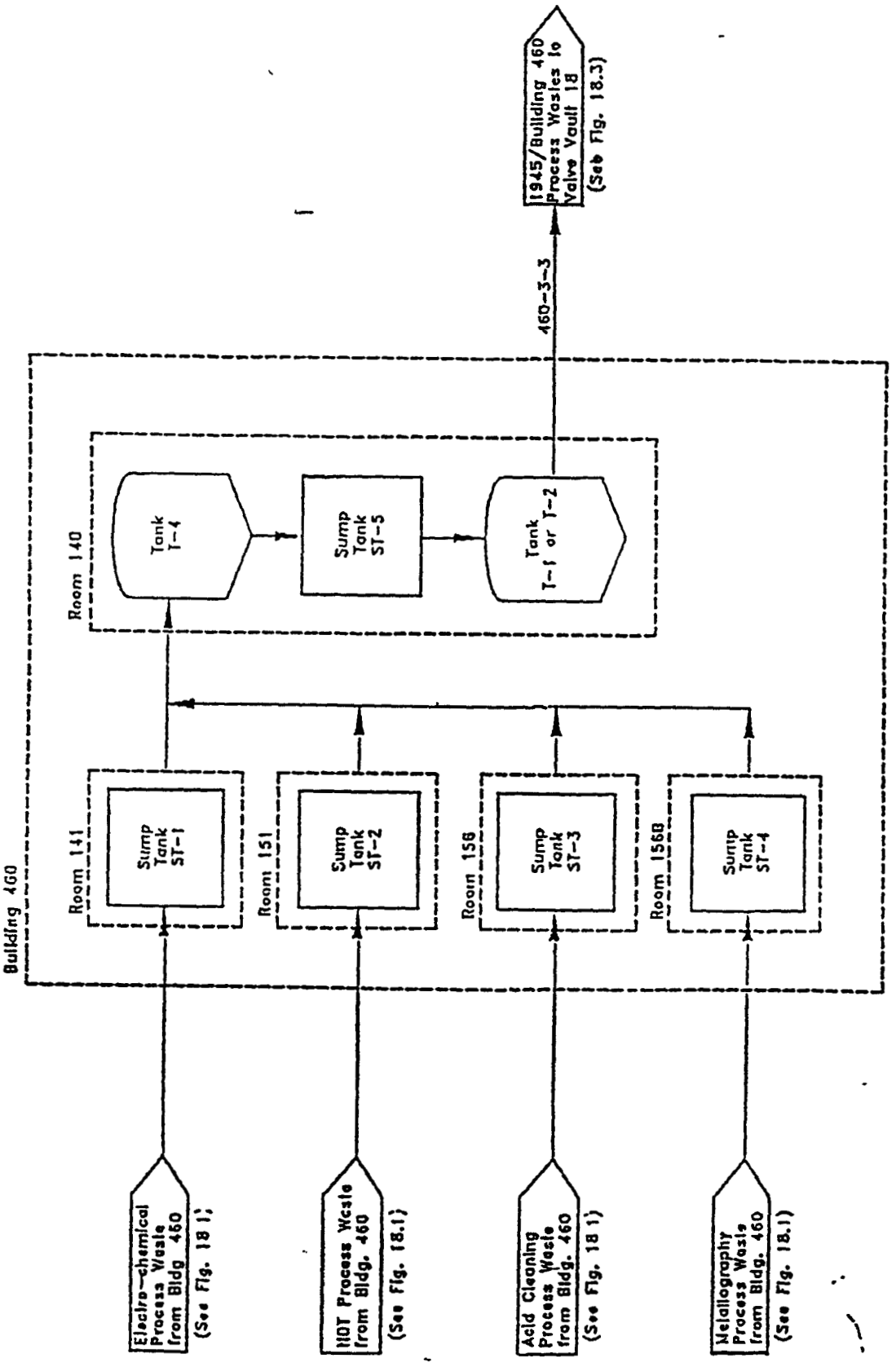
(7) AN ASSESSMENT OF ACTUAL OR POTENTIAL THREAT TO HUMAN HEALTH AND ENVIRONMENT:

The extent of impact to the environment will not be confirmed until the analytical results are validated. Based on preliminary results, the released material was not a hazardous waste. There was no exposure to personnel involved with the clean up. All clean up activities were conducted under the guidance of the Rocky Flats Plant Haz-Mat Team to prevent injury to personnel.

(8) ESTIMATE THE QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT:

The released material was estimated to be approximately 25 gallons. The Rocky Flats Plant Haz-Mat Team recovered approximately 12 gallons of material that was placed back into the process waste system of Building 460. The remainder evaporated from the pavement and/or soaked into the soil in the vicinity of the tanker. The disposable absorbent socks, personal protective equipment (PPE), and sample equipment generated by the cleanup was placed into the Building 460 90-day accumulation area. The soil affected by the release was recovered and drummed up, generating 8 drums of material. A temporary 90-day accumulation area was established in the vicinity of Building 460 (Unit #460-2060).

The final disposition of the soil will be determined pending the receipt of validated results of the laboratory samples. If the soil is determined not to be hazardous waste or subject to any other regulatory consideration, the material will be placed back into the area of excavation. The absorbent socks, disposable PPE and sample equipment will also be dispositioned based on the final analytical results.


1945/Building 460
Process Wastes to
Valve Vault 18
(See Fig. 18.3)
460-3-3
Building 460
Room 140
Tank
T-4
Sump
Tank
ST-5
Tank
T-1 or T-2
Room 141
Sump
Tank
ST-1
Room 151
Sump
Tank
ST-2
Room 156
Sump
Tank
ST-3
Room 156B
Sump
Tank
ST-4
Electro-chemical
Process Waste
from Bldg. 460
(See Fig. 18.1)
HOT Process Waste
from Bldg. 460
(See Fig. 18.1)
Acid Cleaning
Process Waste
from Bldg. 460
(See Fig. 18.1)
Metallography
Process Waste
from Bldg. 460
(See Fig. 18.1)

EG&G ROCKY FLATS

INTEROFFICE CORRESPONDENCE

DATE: December 6, 1993

TO: Distribution

FROM: R N. Bell, Central Fleet Management, Bldg. 331, X4790

SUBJECT: MANAGER'S MEETING, INTERNAL REPORT #1810, FUEL SPILL ON NOVEMBER 22, 1993 - RNB-151-93

A Manager's meeting to review the gasoline spill at the South East corner of Building 980, on November 22, 1993, convened in the Building 130 Auditorium on Monday, November 29, 1993.

Attendees

R. N Bell - CFM
P. A. Vallejos - CFM
J. R. Cable - Facility Ops.
N. S. Demos - ERM
L. R. Burkham - Occ. Rptg.
N. A. Ben - Occ. Rptg.
R. G. Johnson - Facility Ops.
M. L. Johnson - WRP
J. M. Mynard - Facility Ops.
R. A. Nelson - CFM
E. D. Suiter - Transportation - Recording Secretary

Background Information:

Central Fleet Management fuel truck re-fuels WSI vehicles inside the Protected Area (PA), from a truck that contains 3 fuel tanks, 50 gal gas, 80 gal gas and 80 gal. diesel. Since the 50 gal. tank refuels quicker than the 80 gal. tank, the refueling takes place from the 50 gal. tank. The tanks are full when truck enters the PA. Nozzles do have an automatic shut off and in addition, nozzles have a mechanical catch that holds the nozzle open. In cases of extreme cold weather, the Service Attendants hands, even when wearing gloves, could suffer frost bite if nozzles could not be latched open during fueling.

Current fueling locations, inside the PA, were designated by WSI. A previous fueling site was on asphalt in a roadway. This location was changed since it could cause problems in case of emergency. The 2 current refueling sites in the PA; off roadway, West of Portal 1 and West of Cooling Tower 3, by Building 561. Also, on weekends, the 750 court yard. Ralph Bell has had on going negotiations with WSI trying to reduce the numbers of vehicles and frequency of refueling in the PA. WSI wanted 4 or 5 locations, but were negotiated down to 2.

EG&G ROCKY FLATS, INC., ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 (303) 966-7000

The Central Fleet Management PM shift Service Attendants are responsible for refueling in the PA; outside the PA, the vehicle comes to the Garage for refueling, unless out of fuel.

Portable refueling locations use a drip pan for refueling, if gas drips, it drips into pan and the excess fuel is returned to the tank.
Incident Information:

On November 22, 1993, at approximately 6:00 PM, the Service Attendant was refueling WSI vehicles at the South East corner of Building 980. Took hose from 80 gal tank into the 50 gal tank, the hose from the 50 gal tank was laying in the truck bed, ready to refuel the WSI vehicle. The Service Attendant turned on the tank pump, while standing in the truck bed The 50 gal hose nozzle was inadvertently left open and .7 gallons of gas was dispensed onto the truck bed and onto the ground. WSI called their Central Dispatch, the Fire Department was notified and the Shift Manager, Chris Keese picked up the notification on the radio The remains were excavated and are currently in a Black/White Drum at Building 331.

Nick Demos is not comfortable with the stated location. The Garage Foreman will go with the Service Attendant, to revisit the site, then, take Nick to the site on 11/30/93.

The areas of continuing concern:

1). Are refueling stations located in IHSS, ACT areas?

2). Why can't all vehicles come to the Garage for refueling?

3). How does JA Jones handle their refueling?

Additional information:

The concept of having a fueling station inside the PA was discarded due the excavation needed.

Providing a large tanker to refuel vehicles inside the PA is not possible due to OSR for Buildings located in PA.

Actions:

Ralph Bell will set up meeting between WSI, (the GM, or someone with authority) J. R. Cable, Nick Demos and Mickey Johnson to discuss captured vehicle program refueling.

Ralph Bell will also set up meeting between J.A. Jones, J. R Cable, Nick Demos and Mickey Johnson, to determine their refueling procedures.

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Central Fleet Management will investigate mechanical catch on nozzle to determine if it can be removed and still protect attendant's hands in cold weather.

Summary Update:

1. On December 2, 1993, the manual catches on the Garage portable refueling nozzles were removed.

2. Meeting with J.A Jones Personnel was held on December 2, 1993 Summary attached

3. Meeting held with WSI personnel on December 3, 1993 Summary attached

eds

Attachments:
As Stated

Distribution:
N. A. Ben
L. R. Burkham
J. R. Cable
N. S. Demos
M. L. Johnson
R. G. Johnson
J. M. Mynard
R A Nelson
P A. Vallejos

EG&G ROCKY FLATS, INC., ROCKY FLATS PLANT, P O BOX 464, GOLDEN, COLORADO 80402-0464 (303) 966-7000

EG&G ROCKY FLATS

INTEROFFICE CORRESPONDENCE

DATE: December 8, 1993

TO: Record

FROM: R. N. Bell, Central Fleet Management, Bldg. 331, X4790

SUBJECT: REMOTE REFUELING MEETING WITH WSI PERSONNEL - RNB-153-93

Meeting began at 9.00 AM, Friday, December 3, 1993, Building 334 conference room; attendance roster attached

Introduction by Ralph Bell and Jerry Cable on the increased pressure by Colorado Department of Health on management of IHSS areas, Additional Areas of Concern (AAC) and Potential Areas of Concern (PAC), and that the meeting was called to try to identify a reduction in the chances for a spill during remote refueling operations.

Ralph Bell explained that in the week ending November 29, 1993, there were 87 separate refueling actions supporting WSI vehicles within the Protected Area.

Jerry Cable asked that a review of the IHSS map be considered to:

1). Identify the refueling locations over paved surfaces instead of dirt, away from established IHSS areas and;

2). To reduce the number of refueling locations to none, or as few as possible.

Jim Gilmer, WSI, and Bob Gross, DOE, indicated that due to Security Response Requirements and personnel limitations, security vehicles could not leave the PA to refuel at Building 331.

Mr. Gilmer agreed to meet with DOE, Nick Demos and EG&G Security Personnel to identify the two best areas within the PA for portable refueling operations. They planned on a Monday, December 6, 1993, review of the areas.

Ralph Bell asked about increasing the number of PA vehicle passes to allow J. A. Jones vehicles to come out of the PA. Mr. Gilmer indicated that that issue should be addressed separately.

Meeting adjoined at 9:45 AM.

eds

EG&G ROCKY FLATS, INC., ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 (303) 966-7000

EG&G ROCKY FLATS

INTEROFFICE CORRESPONDENCE

DATE: December 6, 1993

TO: Record

FROM. R. N. Bell, Central Fleet Management, Bldg. 331, X4790

SUBJECT: PORTABLE REFUELING MEETING, DECEMBER 2, 1993 - RNB-152-93

Meeting with J. A. Jones representatives began at 2:05 PM, in the Building 551 breakroom. Attendance list is attached.

Introduction by Jerry Cable and Mickey Johnson on the additional areas of concern regarding portable refueling operations

Erv Greenwaldt described the two main refueling points for J. A. Jones as at Building 980/968 and Building 764A. That they didn't bring GSA vehicles out of the PA to refuel at the gas pumps, Building 331, due to an insufficient number of vehicle passes.

Erv indicated that J.A. Jones performs 3 to 10 refueling actions per day on a variety of items, including; pickup trucks, crane, portable generators, pumps, compressors and welding machines. Some of these refuelings occur at job sites and that a drip pan is used during refueling. A copy of the J.A. Jones refueling procedure was provided.

Erv said he would contact their refueling employee to start tracking actual refueling activities each week

Other actions requested of J. A. Jones include:

1). Refuel in a single designated area inside the PA whenever possible.

2). Refuel on asphalt or paved areas, not over dirt.

3). Do not perform refueling on or near an IHSS.

4). Remove the manual latches on the refueling pump nozzles, if this has not already been done.

Mickey Johnson reiterated that any spill must be reported to the EOCNO.

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EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC
ROCKY FLATS PLANT, P O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

December 16, 1993

93-RF-15209

T. E. Lukow, Director
Waste Programs Division
DOE, RFO

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT (CPIR) NO. 93-010 - TGH-665-93

Enclosed is a draft letter to the Colorado Department of Health (CDH) to transmit RCRA CPIR No 93-010, also enclosed. The report outlines the events associated with the release of surface water potentially contaminated with hazardous waste to the environment from the transfer piping associated with Operable Unit (OU) No. 2.

This report should be delivered to CDH by no later than December 19, 1993 as required by 6 CCR 1007-3 Section 265 56(j)(1-7) The repairs to the system have been completed and the system was placed back into operation. A release notification to the National Response Center was not required because analytical data was available and a reportable quantity of the "F-listed" constituents was not released.

If you have any questions regarding this matter please call M. C. Broussard at extension 8517, or E. M. Pasic at extension 2297.

T. G. Hedahl, Associate General Manager
Environmental and Waste Management

EMP:kam

Orig. and 1 cc - T. E. Lukow

Enclosures:
As Stated (2)

DRAFT DRAFT DRAFT

Colorado Department of Health
Hazardous Materials and Waste Management Division
HMWMD-HWC-B2/Frederick R. Dowsett, PhD.
4300 Cherry Creek Drive South
Denver, Colorado 80222-1530

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) CONTINGENCY PLAN IMPLEMENTATION REPORT (CPIR) NO. 93-010

Enclosed is RCRA CPIR No. 93-010, which documents the status and information concerning the release to the environment of approximately 10 gallons (thirty to forty gallons to secondary containment) of surface water potentially contaminated with hazardous waste which is diverted from Walnut Creek as part of a treatability study for Operable Unit (OU) No. 2. This waste is normally treated in a Chemical Precipitation/Microfiltration/Granular Activated Carbon System to remove contaminants from the water. The treated water is then returned to the creek.

The release occurred at approximately 2:30 pm. on December 4, 1993. An subcontractor employee discovered the release from the influent water line in response to an alarm signaling that a release had occurred. Approximately 10 gallons was estimated to have been released to the environment.

The Colorado Department of Health was notified by telephone and the Environmental Protection Agency was notified by facsimile on December 7, 1993.

If you have any questions regarding this subject, please contact the Environmental Restoration Facilities Manager, M. C. Broussard, at 966-8517.

cc:
D. M. Maxwell - EPA, Region VIII
B. Brainard - DOE, RFO
D. Grosek - " "
T. E. Lukow - " "
W.E. Seyfert - " "
M. C. Broussard - EG&G Rocky Flats, Inc.
N. Demos - " " " "
T. G. Hedahl - " " " "
A. L. Schubert - " " " "
T. Vess - " " " "

RCRA CONTINGENCY PLAN
Implementation Report No. 93-010

RCRA CONTINGENCY PLAN IMPLEMENTATION REPORT ROCKY FLATS PLANT EPA ID NUMBER CO7890010526

This report is made in compliance with the requirements of 6 CCR 1007-3, Parts 264 56 (j) and 265 56 (j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this are given below and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Parts 264.56 and 265.56:

"(j)...Within 15 days after the incident, he must submit a written report on the incident to the department. The report must include:

(1) Name, address, and telephone number of the owner or operator
(2) Name, address, and telephone number of the facility
(3) Date, time, and type of incident (fire, explosion)
(4) Name and quantity of material(s) involved
(5) The extent of injuries, if any
(6) An assessment of actual or potential hazards to human health and the environment, where this is applicable; and
(7) Estimated quantity and disposition of recovered material resulted from the incident."

---

(1) NAME, ADDRESS AND TELEPHONE NUMBER OF THE OWNER OF THE FACILITY:

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

Facility Contact:
M. N. Silverman, Manager

(2) NAME, ADDRESS AND TELEPHONE NUMBER OF THE FACILITY:

U.S. Department of Energy
Rock Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

(3) DATE, TIME, AND TYPE OF INCIDENT:

A. SUMMARY:

The RCRA Contingency Plan was implemented on December 4 ,1993, due to a release to the environment of approximately 10 gallons (thirty to forty gallons to secondary containment) surface water potentially contaminated with hazardous waste collected from Walnut Creek. The water is diverted from the creek as part of a treatability study for OU No. 2. The contaminated water is treated in a Chemical Precipitation/Microfiltration/Granular Activated Carbon System. The treated water is then returned to the creek.

The release occurred at 2:30 pm, Saturday, December 4, 1993. A subcontractor employee discovered the release from an influent water line in response to an alarm signaling that a release had occurred. The contractor noticed a slow leak coming from a connection in the secondary containment portion of the influent pipeline The primary pipeline was found to be leaking from a hole in the line. The estimated amount of material released to the environment is 10 gallons by visual determination of the size of the wetted area. Constituents found in the contaminated water support the fact that the contaminated water is an "F001" listed hazardous waste.

An emergency work package was initiated to repair the line. The line was repaired and returned to service on Wednesday, December 8, 1993. The released material was not directly recoverable because it soaked into the soil. Based on previous analytical results of the contaminated water, the immediate removal of the affected soil is not required because the contaminant concentrations in the soil should not pose an unacceptable risk to human health and the environment. This RCRA CPIR will be addressed in the quarterly update of the Historical Release Report.

B. SYSTEM DESCRIPTION:

The system involved with this incident was originally installed in May 1991. The influent line is approximately 1000 feet from the inlet at the creek to the primary tank system. The line has secondary containment and is equipped with electronic sensors at the low points of the line to signal a leak or release of material into the secondary containment system. The line leads into the system that consists of numerous tanks, filters and treatment columns. (See figure 1 for a diagram of the treatment system.) The pipeline is a partial diversion system for the transfer of creek water to the treatment system. The pipeline is insulated with styrofoam and has a heat trace for winter operation. This OU No. 2 treatment facility is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Interim Measure/Interim Remedial Action (IM/IRA) facility and is mandated by the Interagency Agreement (IAG). No Individual Hazardous Substance Site (IHSS) was involved in this incident.

C. DESCRIPTION OF INCIDENT:

A release of potentially contaminated water from an influent pipe system leading from Walnut Creek to the treatment system occurred due to a hole in the primary line. The release was discovered at 2.30 p.m. on Saturday, December 4, 1993. A subcontractor employee discovered the release from an influent water line in response to an alarm signaling that a release had occurred. The line in question has secondary containment. The line was found to be leaking due to a separation of two pipes that make up the secondary pipeline. The pumps was immediately shut down and contractor personnel visually inspected the line for a release. The point of the release was discovered under a road culvert.

D. CORRECTIVE ACTION:

The pumps were de-energized immediately after the leak was discovered. Subcontractor personnel immediately began repairs on the pipe. An emergency work package was completed to temporarily repair the line The incident was not reported to the Emergency Operations Center (EOC), or the Shift Superintendent (the Rocky Flats Plant RCRA Emergency Coordinator) at the time of the incident. A report was made to the EOC on Monday December 6, 1993, at approximately 4:30 pm. The pipeline was repaired and the system was back in operation on December 8, 1993. The pump was re-energized and the system was returned to normal operation. A letter has been written and will be sent to the responsible supervisors outlining release response and reporting requirements at the Rocky Flats Plant. Plans are being made to permanently replace the pipeline to minimize the likelihood of a reoccurrence of a release from this system.

(4) EQUIPMENT STATUS:

The system was repaired and returned to normal operation on December 8, 1993. The daily inspections of the pipeline are continuing.

(5) NAME AND QUANTITY OF MATERIAL INVOLVED:

Due to the fact that the water in Walnut Creek can contain hazardous waste, a determination has been made by the EG&G Rocky Flats Plant, that the "contained in rule" is applicable, and the water entering from the OU2 treatment system contains "F001" listed hazardous waste.

Approximately thirty to forty gallons of hazardous waste was released from the inlet pipe transfer system to secondary containment and approximately 10 gallons was estimated to have been released to the environment. Estimation was done by the area wetted by the release. The water is collected from SW-59, SW-61 and SW-132 [most of which is surface runoff from within the Protected Area (PA)]. The potentially contaminated water is treated for removal of volatile organic, soluble metals, and radioactive constituents. The water is sampled weekly for characterization. F001 listed hazardous waste constituents have been detected in trace amounts in the influent water. The most recent sample date from the time of the incident was conducted December 8, 1993. The F001 listed contaminants that have been detected are carbon tetrachlonde, methylene chlonde, trichloroethene and tetrachloroethene. Additionally, chromium and 1,2-dichloroethene, chloroform, 1,1-dichloroethane, and 1,1-dichloroethene have been detected in the influent water but not at levels that would make the water a characteristic hazardous waste. The chemical 1,2 dichlorethylene has also been detected in the influent. Other contaminants that have been tested for but not found are acetone,vinyl chloride, barium, cadmium, lead and mercury. These analytical results come from over 100 sampling events that took place from May 29, 1991, to December 8, 1993 (refer to Tables 1 and 2). The series of samples were taken to determine the constituents that may be present in the water. The water is also sampled weekly on a continuing basis. The result of previous sampling are listed in Table 1 and 2.

(6) EXTENT OF INJURIES:

There were no injuries. During the repairs to the pipeline, the contractor personnel wore the proper protective clothing.

(7) **AN ASSESSMENT OF ACTUAL OR POTENTIAL THREAT TO HUMAN HEALTH AND ENVIRONMENT:**

The released material was not directly recoverable because it soaked into the soil. Based on the analytical results, the immediate removal of the affected soil is not required because the contaminant concentrations in the soil do not pose an unacceptable risk to human health and the environment. This RCRA Contingency Plan Implementation Report will be addressed in the quarterly update of the Historical Release Report.

(8) **ESTIMATE QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT:**

None of the material was recovered.

TABLE 1

Baseline Data for Influent Dissolved and Total Metals (mg/L) **

Analyte	Highest Value Detected (mg/L)	CRDL (mg/L)	RCRA TCLP Regulatory Limit (mg/L)
Barium (D005)	Below Detection Limit	0.200	100.0
Cadmium (D006)	Below Detection Limit	0.005	1.0
Chromium (D007)	.015	0.010	5.0
Lead (D008)	Below Detection Limit	0.003	5.0
Mercury (D009)	Below Detection Limit	0.0	0.2

CRDL - Contract Required Detection Limit
TCLP - Toxicity Characteristic Leaching Procedure

TABLE 2
VOLATILE ORGANIC COMPOUNDS *

Analyte	Highest/Average Value Detected (mg/L)	SDWA MCLs (mg/L)	RCRA TCLP Regulatory Limit (mg/L)
Trichlorethene (F001) (D040)	0.051/0.016	0.005	0.50
1,2-Dichloroethene (D028)	0.043/0.016	0.005	0.50
Carbon tetrachloride (F001) (D019)	0.082/0.024	0.005	0.50
Tetrachloroethylene (F001) (D039)	0.052/0.014	0.005	0.70
1,2-dichloroethylene (U079)	0.038/0.017	0.070	-
Methylene Chloride (F001)	0.001/0.0002	-	-
1,1-Dichloroethene (D029) (U078)	0.003/0.0006	0.007	0.07
Chloroform (D022)	0.012/0.004	-	6.00

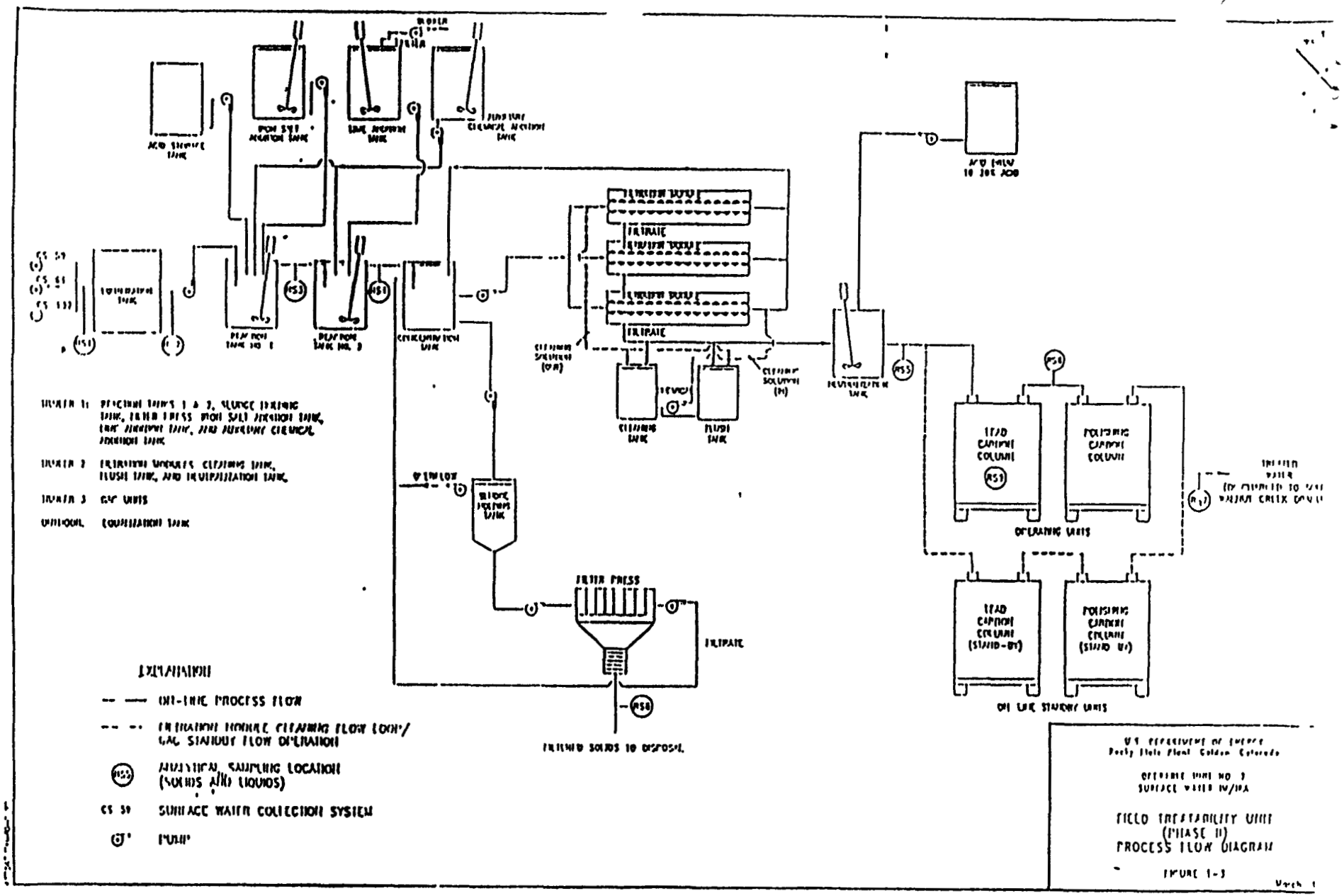
MCLs - Maximum Contaminant Levels **- No Standards Listed**

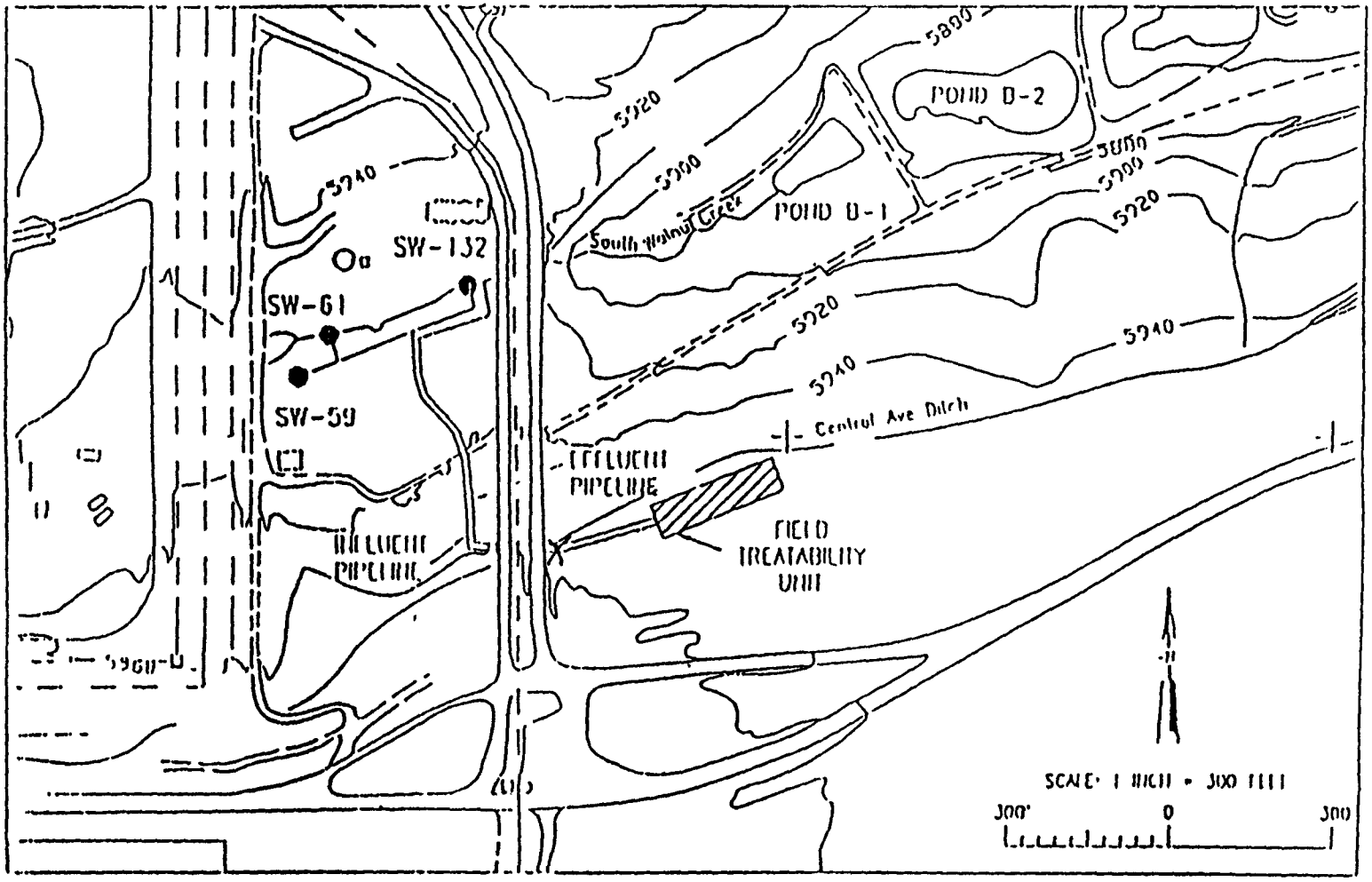
SDWA - Safe drinking Water Act

Volatile Organic Compounds Sampled for but not found:

Acetone (F003)
Vinyl Chloride (D043)

* (Based on weekly sample events for the third quarter of 1993.)
** (Based on sampling events from 05/92 to 2/11/92.)


ACID STORAGE TANK
IRON SALT PRECIPITATION TANK
LIME PRECIPITATION TANK
SODIUM CHLORIDE PRECIPITATION TANK
ACID ADDED TO 300 AGS
EQUALIZATION TANK
PRECIPITATION TANK NO. 1
PRECIPITATION TANK NO. 2
CENTRIFUGE FEED TANK
FILTRATE
CLEANING SOLUTION (CS)
CLEANING TANK
FLUSH TANK
REVERSE OSMOSIS TANK
LEAD CAPTURE COLUMN
POLISHING CAPTURE COLUMN
OPERATING UNITS
LEAD CAPTURE COLUMN (STAND-BY)
POLISHING CAPTURE COLUMN (STAND-BY)
ON LINE STANDBY UNITS
TREATED WATER (TO CONNECTED TO WOMAN CREEK DRAIN)
SLUDGE HOLDING TANK
FILTER PRESS
FILTRATE
FILTERED SOLIDS TO DISPOSAL
UNIT 1: PRECIPITATION TANKS 1 & 2, SLUDGE HOLDING TANK, IRON PRESS IRON SALT PRECIPITATION TANK, LIME PRECIPITATION TANK, AND SODIUM CHLORIDE PRECIPITATION TANK
UNIT 2: FILTRATION MODULES CLEANING TANK, FLUSH TANK, AND EQUIPMENT TANK
UNIT 3: GAC UNITS
OPTIONAL: EQUALIZATION TANK
EXPLANATION
ON-LINE PROCESS FLOW
FILTRATION MODULE CLEANING FLOW LOOP/ GAC STANDBY FLOW OPERATION
ANALYTICAL SAMPLING LOCATION (SOLIDS AND LIQUIDS)
SURFACE WATER COLLECTION SYSTEM
PUMP
U.S. DEPARTMENT OF ENERGY
Rocky Flats Plant Golden, Colorado
OPERABLE UNIT NO. 2
SURFACE WATER IM/IRA
FIELD TREATABILITY UNIT (PHASE II)
PROCESS FLOW DIAGRAM
FIGURE 1-3



X approx location of leak/spill

U.S. DEPARTMENT OF ENERGY Rocky Flats Plant Golden, Colorado	FIELD TREATABILITY UNIT PLOT PLAN SOUTH WALNUT CREEK BASIN	FIGURE 2 1 1